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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,652

10/15/2003

Jen-Shou Tseng

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2651

43831

7590

03/06/2006

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EXAMINER

SEVER, ANDREW T

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/605,652	TSENG ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Andrew T. Sever	2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-6, and 15-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujioka et al. (US 5,414,481 as cited in the previous office action.)

Fujioka teaches in figures 1 and 2 an optical scanner suitable for scanning a generally vertical (whiteboard for example) object comprising:

A scanning body (1 and 9), comprising a transparent window (3) on a top surface thereof;

A focusing device (12), including:

An arm (inherently present, but not shown see column 3 lines 24-27), with one end coupled to the scanning body,

A reflective mirror (13 or 14), disposed on the arm, and

A lens (15), disposed on the arm and located at a reflecting path of the reflective mirror; and

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A scanning module (6-8), disposed within the scanning body and capable of reciprocally moving underneath the transparent window (see arrow), the scanning module comprising:

A shell (1), comprising a light cone opening (glass platen 3) capable of receiving an imaging light of the generally vertical object (the optics of the projector are capable of passing an image of a projection screen down to the scanner (5) (See for example JP 06-148744 to Sakai which in figure 3 shows passing an image off of a screen through optics down to a sensor (14)),

A first lens (8), disposed within the shell, and

An optical sensor (5, which is specified to be film a type of sensor) disposed within the shell and located on an optical length following the first lens of the scanning module.

*With regards to applicant's claims 3 and 4:*

It is common for an overhead projector such as Fujioka to be used to project (or in the reverse image) either a blackboard or whiteboard.

*With regards to applicant's claim 5:*

Part 11 is a projection lamp.

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*With regards to applicant's claim 6:*

As shown in figure 1, the scanner includes a light source (7) having a reflector surrounding it, which is in the shell and located along an optical path prior to the lens of the scanning module.

*With regards to applicant's claim 15:*

By not placing any transparency on the platen of Fujioka the scanner would scan and image of the projection screen to be projected upon, even if the image is not necessarily of good quality.

*With regards to applicant's claim 16:*

The scanner scans the image on an optically responsive liquid crystal film, which is a type of electronic storage device.

*With regards to applicant's claim 17:*

Part 11 is a projection lamp.

*With regards to applicant's claims 18 and 19:*

The projector is capable (see Sakai) of imaging both a vertical object and a horizontal object, which would both be focused through the transparent window (3)

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*With regards to applicant's claim 20:*

See column 2 lines 51-66 which teaches specifically in line 62-66 projecting light transmitted through the scanner.

*With regards to applicant's claims 21-26:*

See above which teaches the means (projector/scanner of claims 1-6) for performing the methods of claims 15-20.

*With regards to applicant's claim 27:*

See above.

*With regards to applicant's claim 28:*

Lamp 11 is external to the scanning body (1).

*With regards to applicant's claim 29:*

Light source 7 is internal.

*With regards to applicant's claim 30-32:*

See above with regards to applicant's claims 3 and 4 and claims 18 and 19.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. as applied to claims 1, 3-6, and 15-32 above, and further in view of Minnesota Mining and Manufacturing Company (3M), (EP 0 550 038 as cited in the previous office action.)

Fujioka as described in more detail above teaches an optical scanner, which among other things includes a reflective mirror and lens, suspended over a top surface. Fujioka does not specifically teach an arm comprising a fine-tuning device disposed on it to adjust height and focal length. 3M teaches in figure 1 an optical scanner which includes an arm 16 and an adjustment knob (15) which is a fine-tuning device. 3M teaches in column 3

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lines 44-51 that the knob allows for adjustment of the mirror and lens assembly which as those with ordinary skill in the art at the time the invention was made would recognize allows a user to adjust focal length and height allowing for more flexibility in how the optical scanner is used especially in the overhead projector type applications (it allows a user to position the scanner/projector at a convenient location as the projected image can be adjusted.) Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an arm, and a fine tuning device as taught by 3M to the optical scanner of Fujioka that inherently includes the arm but does not teach its specifics, in order to make the scanner of Fujioka more flexible in where it is positioned with respect to a screen, blackboard, or white board that it is positioned to image/project upon.

6. Claims 7-8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. (US 5,414,481 as cited in the previous office action) in view of Konno et al. (US 5,325,137 as cited in the previous office action.)

Fujioka teaches in figures 1 and 2 an optical scanner suitable for scanning a vertical object (a projection screen for example) and a generally horizontal object (transparency placed on the platen 3), the optical scanner comprising:

A scanning body (1 and 9), comprising a transparent window (3) formed on a top surface thereof;

A focusing device (12), including:



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An arm, with one end coupled to the scanning body (inherent see discussion above with regards to applicant's claim 1),

A reflective mirror (13 and 14), disposed on the arm, and

A lens (15), disposed on the arm and located at a reflecting path of the reflective mirror; and

A scanning module (6-8), disposed within the scanning body and capable of reciprocally moving underneath the transparent window (see arrow), the scanning module comprising:

A shell (1), having a light cone opening (glass platen 3 as well as opening in 6 which is the scanning unit) for receiving an imaging light of the vertical object and the horizontal object;

A first lens (8), disposed within the shell; and

An optical sensor (5, which is specified to be film a type of sensor), disposed within the shell and located on an optical length following the first lens.

Fujioka, however, does not teach that a lid is pivotally connected to the scanning body to cover the transparent window. Such lids are frequently provided in horizontal scanners to allow for better scanning of an object placed on the transparent window. Konno teaches such a lid in figure 5 part 26. In column 13 lines 17-24 that the lid is provided to allow the light scanning the object in the case of a transparency to reflect back to the scanner and it also prevents unnecessary light from breaking in the writing light from the outside.

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Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include such a lid in the optical scanner of Fujioka.

*With regards to applicant's claim 8:*

The lens (8) inherently has more than one focal point (Before and after the lens).

*With regards to applicant's claims 11 and 12:*

It is common for an overhead projector such as Fujioka to be used to project (or in the reverse image) either a blackboard or whiteboard (see Sakai cited above, which teaches projecting and imaging with the same optics in an overhead projector.)

*With regards to applicant's claim 13:*

Part 7 of Fujioka is a lamp.

*With regards to applicant's claim 14:*

As shown in figure 1 of Fujioka, the scanner includes a light source (7) having a reflector surrounding it, which is in the shell and located along an optical path prior to the lens of the scanning module.

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7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. in view of Konno et al. as applied to claims 7-8 and 11-14 above, and further in view of Stocker (US 2004/0095614 as cited in the previous office action.)

As described in more detail above, Fujioka in view of Konno teach an optical scanner having among other things a scanning module containing a first lens. Fujioka in view of Konno do not teach a second lens with a focal length different then that of the first lens, wherein the first and second lenses are switchable with each other. Stocker teaches such a lens system in a scanning module of an optical scanner in figure 1 which teaches interchangeable lenses 28 and 26. Stocker teaches in paragraph 24 that the two lens assemblies are provided in order to give an option of having at least two different resolutions of the image, given that this is useful as different objects being scanned need to be scanned at different resolutions, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the two lenses with different focal lengths in the projector of Fujioka in view of Konno as taught by Stocker.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka in view of Konno as applied to claims 7-8 and 11-14 above, and further in view of Minnesota Mining and Manufacturing Company (3M), (EP 0 550 038 as cited in the previous office action.)

Fujioka in view of Konno as described in more detail above teaches an optical scanner, which among other things includes a reflective mirror and lens, suspended over a top

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surface. Fujioka in view of Konno does not specifically teach an arm comprising a fine-tuning device disposed on it to adjust height and focal length. 3M teaches in figure 1 an optical scanner which includes an arm 16 and an adjustment knob (15, fine tuning device). 3M teaches in column 3 lines 44-51 that the knob allows for adjustment of the mirror and lens assembly which as those with ordinary skill in the art at the time the invention was made would recognize allows a user to adjust focal length and height allowing for more flexibility in how the optical scanner is used especially in the overhead projector type applications (it allows a user to position the scanner/projector at a convenient location as the projected image can be adjusted.) Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an arm, and a fine-tuning device as taught by 3M to the optical scanner of Fujioka in view of Konno that inherently includes the arm but does not teach its specifics, in order to make the scanner of Fujioka in view of Konno more flexible in where it is positioned with respect to a screen, blackboard, or white board that it is positioned to image/project upon.

### ***Response to Arguments***

9. Applicant's arguments filed 12/19/2005 have been fully considered but they are not persuasive.

Applicant first argues that Fujioka does not disclose a vertical object. First applicant should note the term "vertical" is a relative term and applicant has failed to provide a

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limitation by which it can be determined what is vertical, what is horizontal, and what is not. Generally vertical objects are considered perpendicular to horizontal. With this definition one could say that a transparency placed on the platen 3 would be vertical, and then when turned 90 degrees is horizontal. If applicant is referring to a wall or some other surface to be projected upon by mirror 14 (as has been assumed in the above rejection), although not shown by Fujioka, it is inherent that some surface is present, as it is generally not effective to project into empty space or useful. (See the Sakai reference, which shows what an overhead projector both projects upon and those that can image like the Fujioka, what they could image.)

Applicant then argues that Fujioka does not disclose imaging a blackboard or whiteboard or other projection surface. The Sakai reference has been added to show that it is inherent that the projection optics of an overhead projector can in fact image the projection surface. While this may not be the intended purpose of the imaging systems of Fujioka, they would be capable of doing so. Applicant has amended the claim language to make this ever more applicable, as applicant claims now that the claimed apparatus is “capable of” imaging an object, not that it generally would or that it would be the best image. The Fujioka reference inherently is capable of performing applicant claimed functions. It should be noted that MPEP 2144.03 part D allows for an action to be made final when the only change is the addition of art (Sakai) that shows something that was previously stated to be inherent as the grounds of rejection have not changed also see MPEP 2131.01 part III. (Fujioka has always been able to image a projection surface,

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even if it would not result in superior images, the Sakai reference just shows this actually being done (on purpose).)

Accordingly applicant's arguments are not found persuasive the rejection has been modified to reflect applicant's new language and made final. Applicant only argues the other claims with the assumption that the above arguments are correct. They have been found not to be persuasive and accordingly all rejections are modified to reflect applicant's new language and clarify what parts meet applicant's claimed limitations, and made final.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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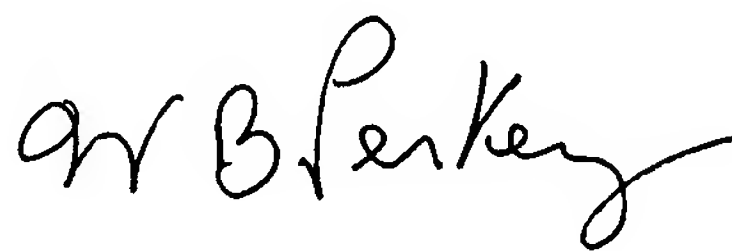
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



**William Perkey**  
**Primary Examiner**